

SYSTEM FOR SEPARATING FLUID-BORNE MATERIAL FROM A FLUID THAT
CARRIES PARTICULATE MATTER ALONG WITH THE MATERIAL

ABSTRACT OF THE DISCLOSURE

A system for screening fluid-borne material from a fluid that carries particulate
5 matter along with the material, e.g. for screening usable fibers in papermaking or tissue
making white water that also contains waste material such as fines and ash. The system
employs a flexible and pliable screen to which the fluid is applied. The screen is supported
in a suspended manner from a frame. The fluid is directed onto an inside surface defined by
the screen, and the location at which the fluid strikes the screen is varied so as to result in
10 bending and flexing of the screen due to the flexibility and pliability of the screen material.
In this manner, the configuration of the screen drainage passages is continuously altered, to
provide a self-cleaning action that prevents the screen passages from plugging or blinding
over. In one form, the screen is generally frustoconical, and the fluid is applied to the inside
surface of the screen in a manner which results in rotation of the screen. The material
15 retained on the screen is directed toward a discharge opening defined by the lower end of the
frustoconical screen, and the waste water including the particulate matter passes through the
screen and is collected in a waste water collection tank. In another form, the screen is
suspended from a frame to form a trough configuration having an open discharge end. The
frame is movable in either an axial direction or a transverse direction, to cause movement of
20 the screen and to obtain the desired flexing and bending of the screen to self-clean the screen
drainage passages.